

ABSTRACT

In this research, the reduction of phosphate levels in detergent waste has been carried out using water hyacinth charcoal. The reduction of phosphate levels was carried out by varying the mass of the adsorbent charcoal and immersion time. Phosphate reduction has been successfully carried out with a TDS reduction value of 3122 ppm at 10 grams char mass variations tested using a salinometer. Water hyacinth charcoal which has been successfully used to reduce the phosphate level, then the soaking time is varied with the aim of increasing the adsorption ability of water hyacinth charcoal. In this study, the maximum value of reduction occurred after soaking for 240 minutes and using 10 grams of mass and immersion for 240 minutes, which was 95.32%

Keywords: phosphate, detergent, water hyacinth charcoal, adsorption, pH, degradation